United States Environmental Protection Agency

Region 10 Emergency Response Unit

POLLUTION REPORT

I. HEADING

Date: June 18, 2001
Subject: Kerr McGee Site, Soda Spring, Idaho
From: Carl Kitz, OSC, USEPA, Region 10, Emergency Response Unit
Tel: Office (206) 553-1671
To: See Distribution List on last page

POLREP No.1 (Progress)

II. BACKGROUND

Site ID:
Delivery Order No: PRP Lead
Response Authority: CERCLA
CERCLIS No: IDD041310707
NPL Status: Listed on October 4, 1989
State Notification: Idaho Department of Environmental Quality notified
Action Memo Status: Record of Decision signed September 1995
Removal Start Date: May 7, 2001
Expected Completion Date: October 2001
Site Web Page: www.epa.gov/region10/, click Index, click K for Kerr McGee.

The site is owned by Kerr McGee Chemical LLC (KMC). KMC operated a vanadium production facility from 1963 to January 1999. The facility extracted vanadium from ferrous-phosphate ore which was supplied by Monsanto Chemical Company as a by-product. During operations, the facility generated a number of solid and liquid wastes and stored them in on-site unlined impoundments. Groundwater beneath the site has been affected by leachate chemicals from the unlined impoundments. The chemicals of concern include vanadium, arsenic, molybdenum, manganese, tributyl phosphate, and total petroleum hydrocarbons. Approximately 23 people live within one mile of the site. Within 3 miles of the site are public springs and private wells that provide drinking water to over 3,000 people and a private well that irrigates 165 acres of crops.

The site was placed on the National Priorities List (NPL) on October 4, 1989. On October 1990, KMC entered into a consent agreement with EPA to perform the necessary investigations to complete a remedial investigation/feasibility study (RI/FS) for the site. In September 1995, EPA signed a Record of Decision (ROD) which required elimination of the three unlined waste impoundments (S-X raffinate pond, scrubber pond, and active calcine tailing impoundment) that released contaminants to groundwater above risk-based cleanup levels. In 1997, KMC constructed an on-site landfill and disposed of 13,000 cubic yards of contaminated pond sediments from two waste ponds (S-X raffinate and scrubber ponds). The original ROD required excavation and reuse/recovery of active calcine tailing to produce fertilizer over an eight-year period. However, the fertilizer operation is unable to meet the requirement due to problems associated with operational equipment and a shrinking market. During April 2000, EPA proposed to revise the original ROD to cap the calcine in place and include roaster reject material and off-specification fertilizer in the covered impoundment. Approximately 900,000 tons of calcine, 2,500 tons of roaster reject, and 3,900 tons of off-specification fertilizer are to be capped in the active calcine impoundment.

III. SITE INFORMATION

A. Incident Category

This is a non time-critical remedial action at an active vanadium production facility.

B. Site Description

1. Site Location

The Kerr McGee site is located at 1864 North Highway 34 in Soda Spring, Caribou County in Section 32, Township 8 S, Range 42 E, with a latitude 42^0 42' 15" North and longitude 111^0 34' 26" West. The total property area is 332 acres. The active calcine capping area comprises approximately 27 acres. The site is located approximately 1.5 miles north of Soda Spring. The vanadium plant is currently idle.

The site is underlain by approximately 0 to 50 feet of recent, unconsolidated alluvium which is underlain by the basalt of approximately 230 feet. Groundwater occurs in two aquifers: a basalt aquifer which consists of basalts and interflow zones and a shallow thin saturated zone in the alluvium; and a deeper aquifer in the Tertiary Salt Lake formation at a depth of approximately 231 feet. The basalt aquifer is the main aquifer of concern. Groundwater flow in the shallow basalts beneath the site is approximately due west.

IV. Response Information

A. Situation

1. Current Situation

June 11 to 14, 2001

June 11 (Monday)
Personnel on site: 1 START, 1 EPA
Weather : Sunny, temperatures are in 60's F.
KMC's contractor RECON continued to perform final grading and compaction in the southern portion of the calcine area; continued to grade the calcine surface in the northern portion to final elevation; continued to excavate, transport, and stockpile borrow soil in the designated area; EPA OSC and START met with KMC site manager and construction manager (Global Environmental Technologies LLC.); attended site health and safety orientation; walked around calcine capping area and flexible membrane cover storage area; requested site progress information and construction assurance records; begun to prepare this pollution report (Polrep).

June 12 (Tuesday)
Personnel on site: 1 START, 1 EPA
Weather: Raining, temperatures are in 40-50's F, moderate north wind.
No RECON crew is on site due to rainy weather. KMC's contractor Harper-Leavitt Engineering, inc. performed compaction tests in the northwest area. The EPA OSC and START observed the compaction tests. START reviewed compaction test reports, daily health safety meeting records, and daily activity notes, which were provided by the construction manager, Global Environmental Technologies LLC. The need to remove debris, such as broken plastic pipe which could damage the liner, was pointed out to the construction manager. START prepared Polrep.

June 13 (Wednesday)
Personnel on site: 1 START, 1 EPA
Weather: Snowing, temperatures are in 30's-40's F.
A part of RECON crew was working on borrow soil storage area. Borrow soil was being pushed away from the centerline of liner anchor trench. Due to the wet and soft surface, no work was done in the calcine capping area. The liner installation contractor will not mobilize until next Monday, June 18, 2001, partly due to the weather. The EPA OSC and START expressed concerns to the construction manager on meeting the construction schedule, and pointed out that certain work is weather-restricted and should be completed before the temperature drops below zero Celsius.

June 14 (Thursday)
Personnel on site: 1 START, 1 EPA
Weather:
EPA OSC and START left the site.

2. Remedial Actions to Date

Following actions have been completed in accordance with the ROD:

- Constructed an on-site lined landfill to contain excavated solid waste.
- Excavated sediments from the scrubber and S-X ponds and disposed of the sediments in the landfill.
- Backfilled the scrubber and S-X ponds with clean native soil to ground elevation.
- Constructed two double lined ponds to contain newly generated raffinate stream.
- Constructed a fertilizer plant to implement the reuse/recovery requirement described in ROD. However, the fertilizer plant was not successful due to problems mentioned in Section II.
- Transported, placed, and compacted roaster reject, off-specification fertilizer, and historical calcine in the active calcine capping area.

3. Enforcement

The cleanup action was PRP lead and performed as a result of Administrative Order on Consent between KMC and EPA.

B. Planned Remedial Activities

Remaining actions required by the ROD include:

- Semiannual groundwater monitoring.
- Institutional control to ban drilling wells in the affected area.

C. Next Steps

The next step of capping the calcine area includes installation of geomembrane and geocomposite drainage net on the top of completed calcine surface, followed by placement of 2 feet clean subgrade soil and 1 foot top soil, and completed with a vegetation layer. A chain link fence will be installed around perimeter of the cap for security purpose.

EPA OSC and START will conduct periodic site visits to monitor the progress of work by Kerr-McGee and its contractors.

D. Key Issues

Late starting date by liner contractor may impact ability to complete all of the required work this calendar year.

V. Cost Information

Estimated costs are summarized below

	Established Ceiling	Estimated Costs as of date listed
START	$30,000	$2,109.17 (6/9/01)
Total	$30,000	$2,109.17 (6/9/01)

Note: The above accounting of expenditures is an estimate based on figures known to the OSC at the time this report was written. The cost accounting provided in this report does not necessarily represent an exact monetary figure which the government may include in any claim for cost recovery.

VII Distribution

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